

CEEPR/EPRG/EDF European Energy Policy Conference

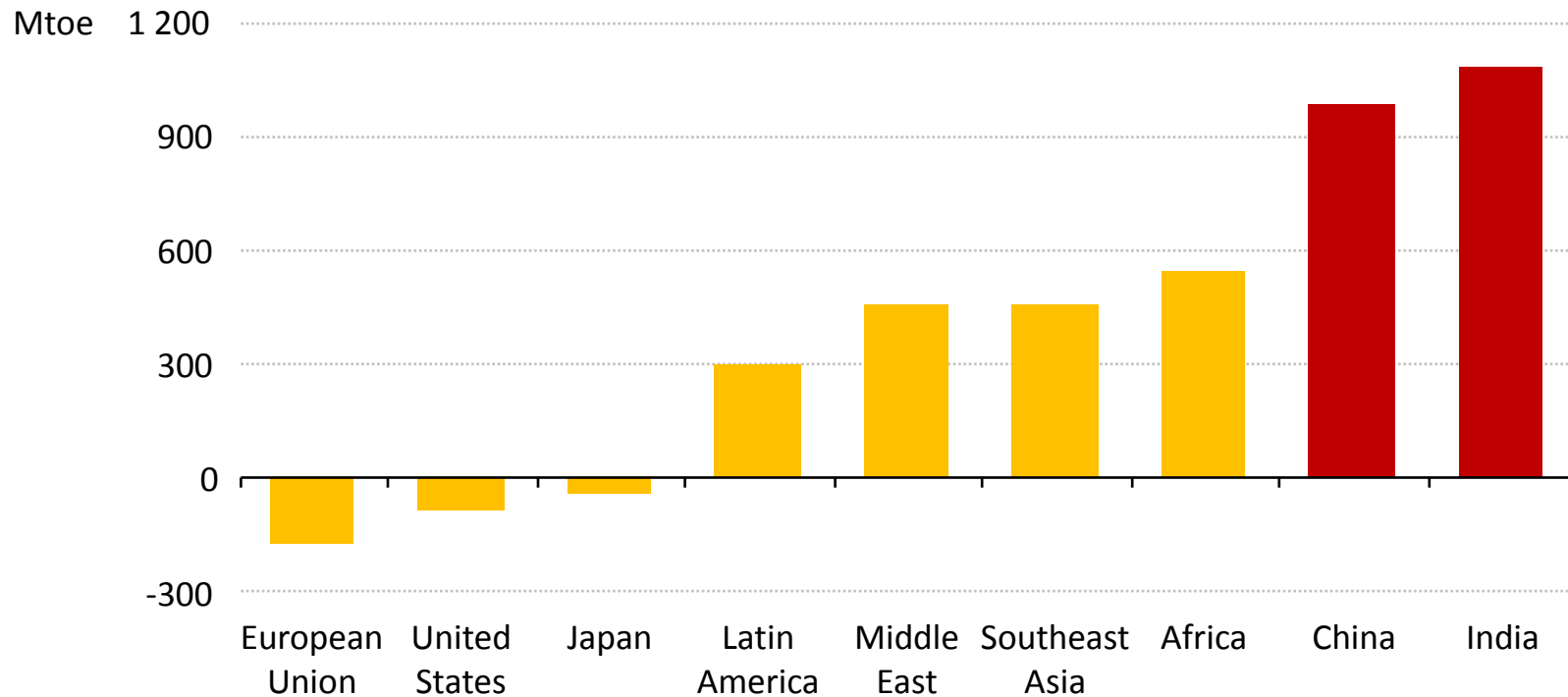
Dr Fatih Birol

Executive Director, International Energy Agency

Paris, 7 July 2016

Demand growth in Asia – the sequel

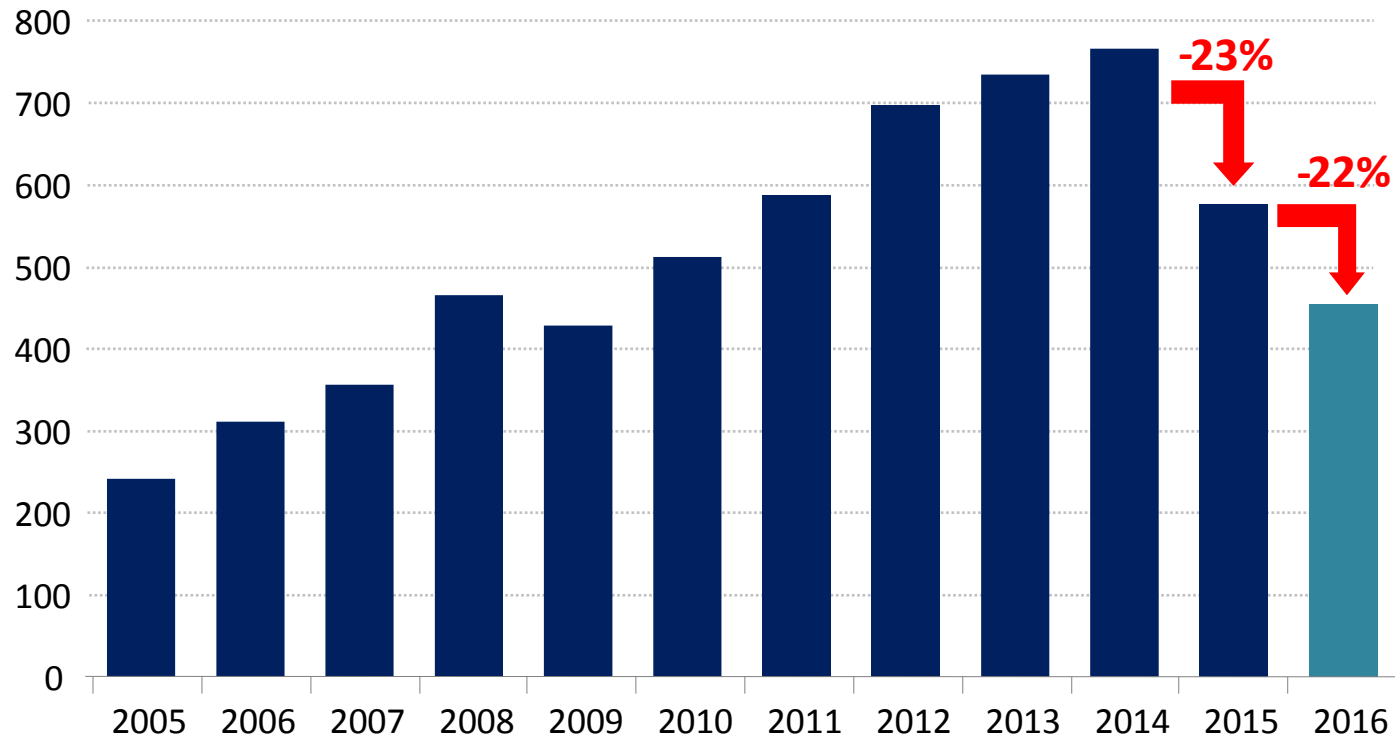
Change in energy demand in selected regions, 2014-2040



Energy use worldwide grows by one third to 2040, driven by Asia; EU energy demand declines by 15% over the period

Upstream oil and gas investment continues to fall

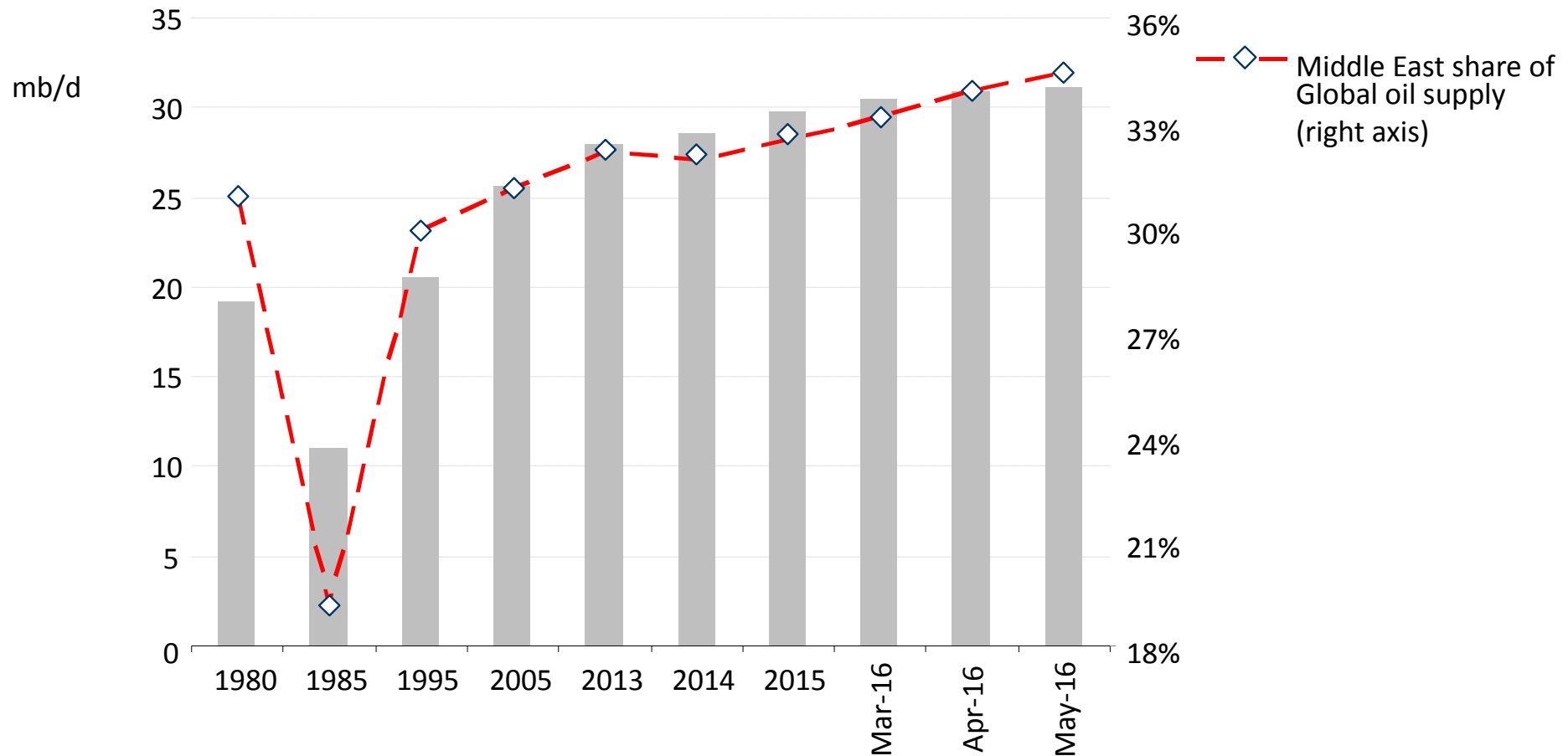
Upstream oil and gas investment



Upstream oil and gas investment continues to fall, particularly in high-cost regions; this raises the prospect of price volatility & greater reliance on the Middle East in the future

The Middle East takes back centre stage

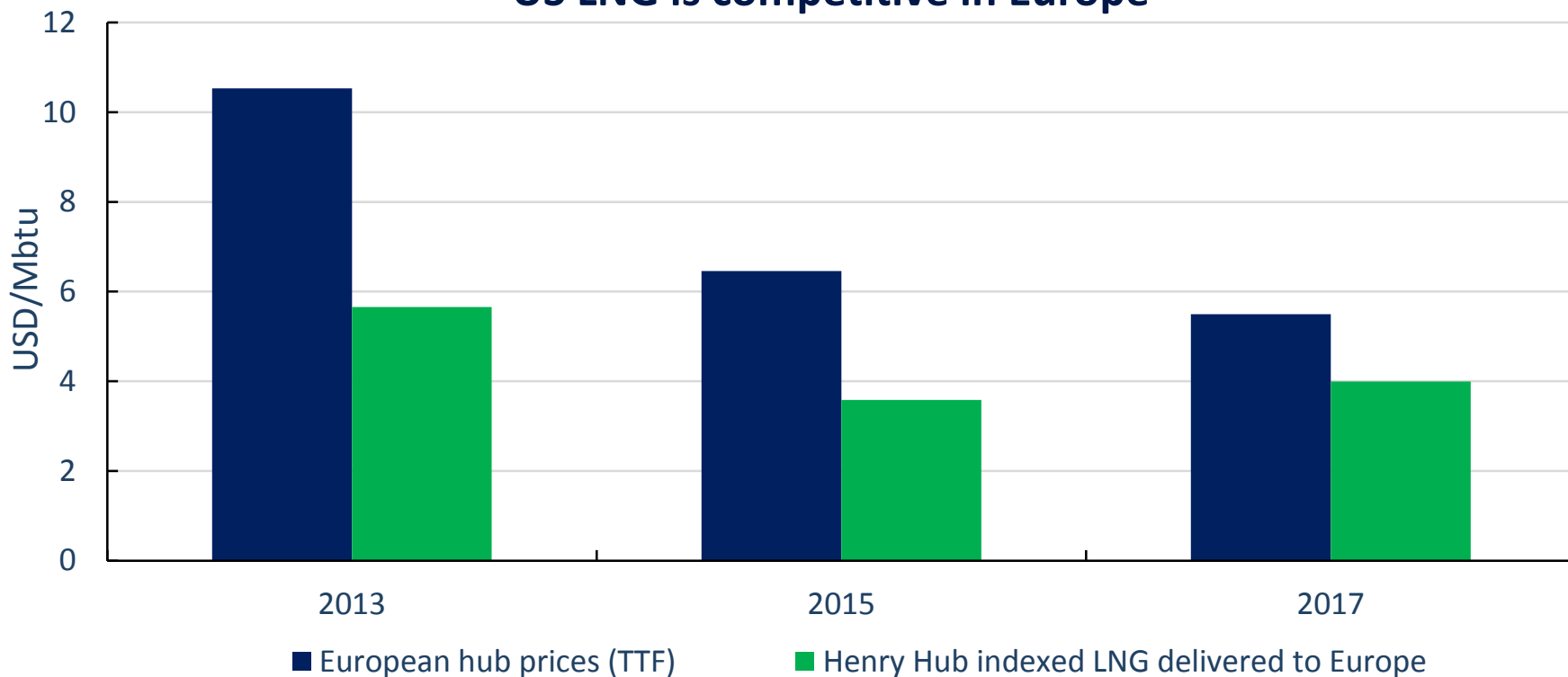
Middle East oil production, 1980-2016



Reliance on Middle East oil is rising sharply, with big increases in supply in Saudi Arabia, Iraq & Iran

Greater competition is coming to the European gas market

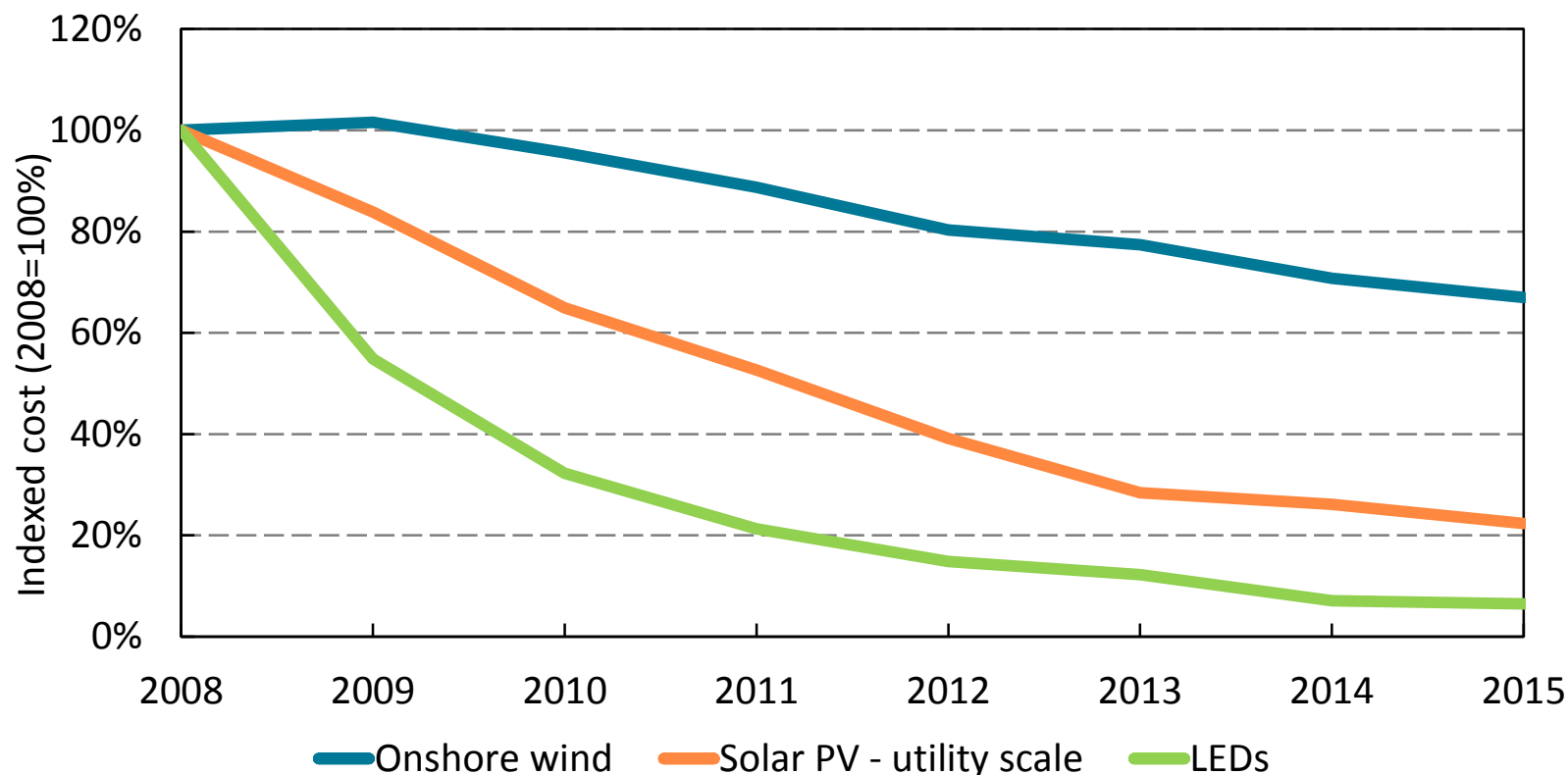
US LNG is competitive in Europe



Oversupply in global LNG markets will intensify competition; flexible US LNG volumes are well-placed to compete in Europe

The cost of clean energy continues to fall

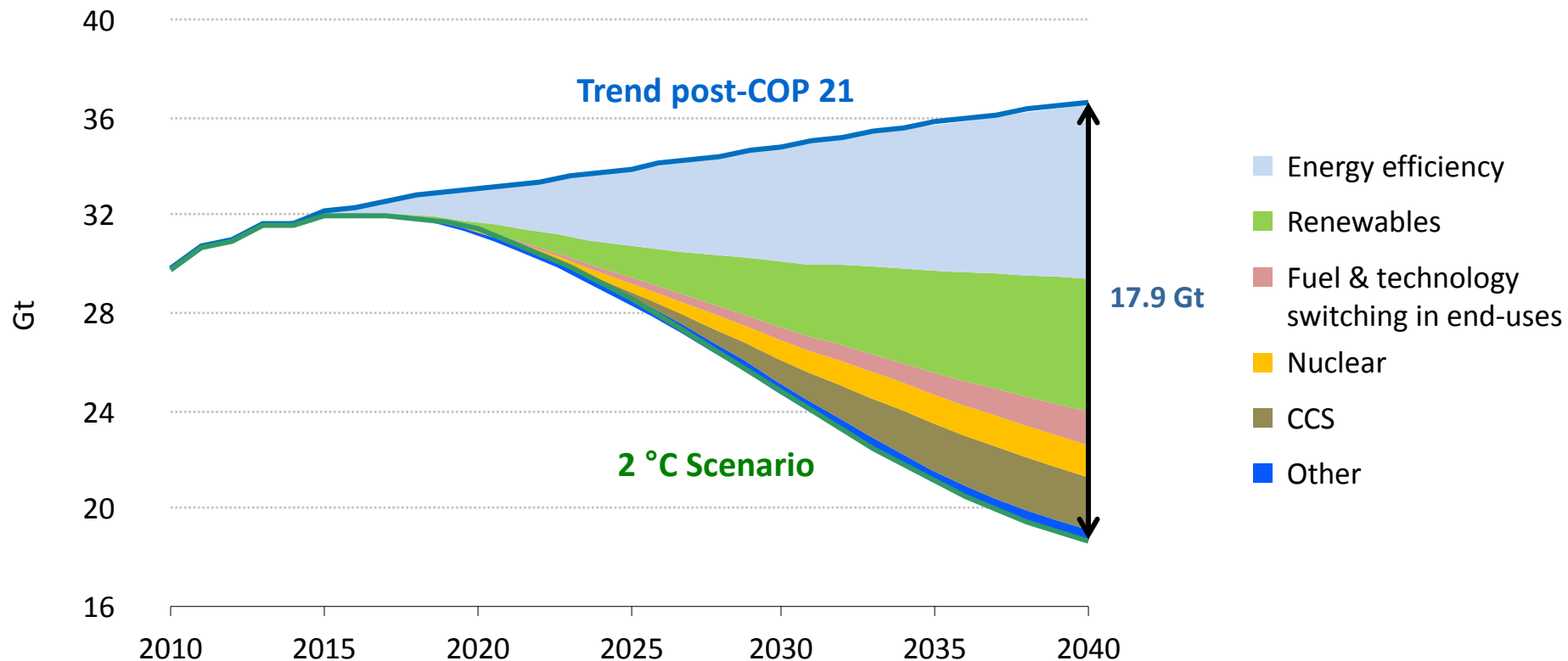
Indexed cost of onshore wind, utility scale PV and LED lighting



The falling cost of clean energies opens new opportunities and provides scope for support mechanisms to be reviewed

A 2 °C pathway requires more technological innovation, investment & policy ambition

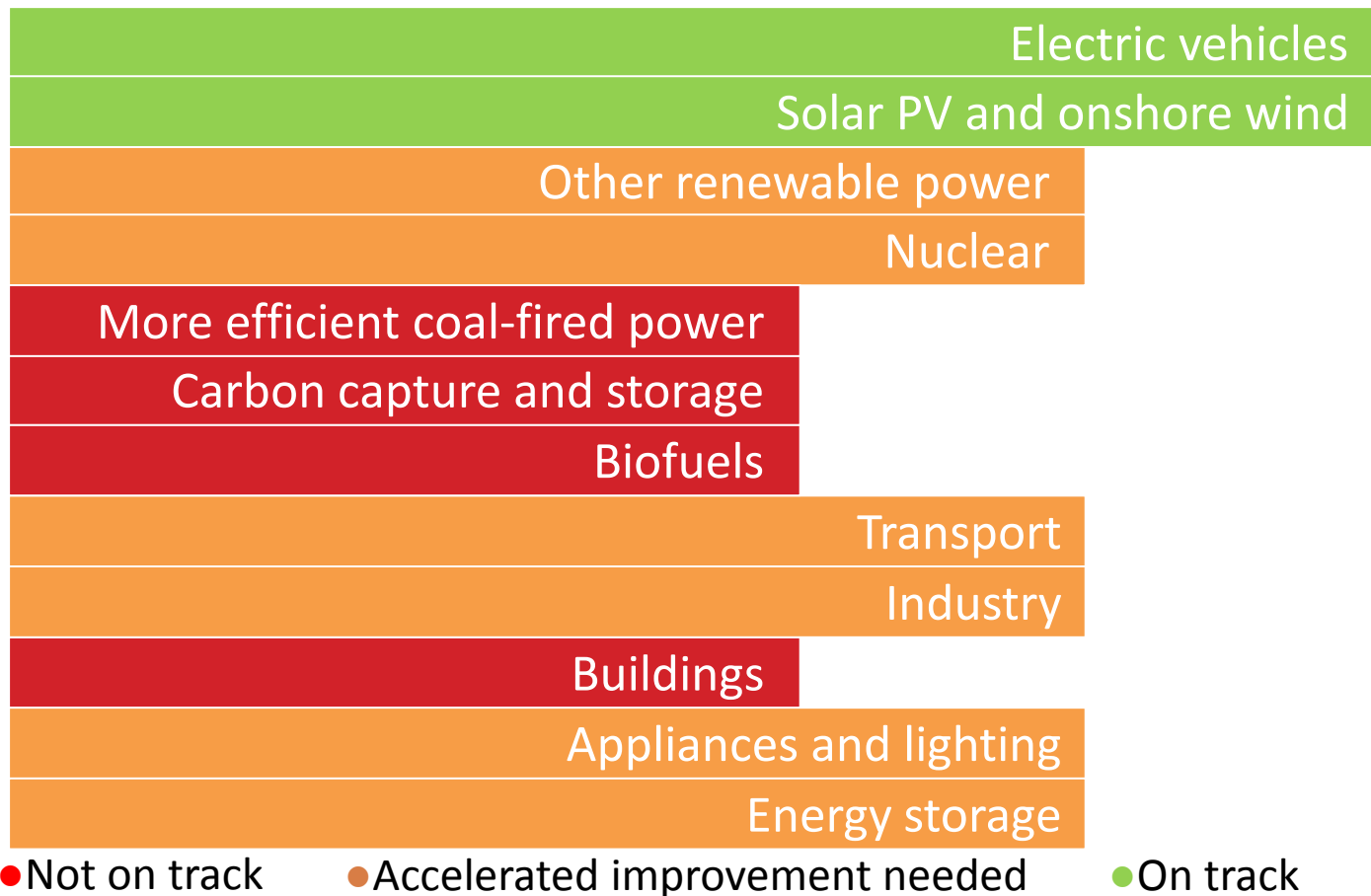
CO₂ emissions in a post COP 21 world



Even greater efforts in efficiency, renewables, nuclear power and other low carbon technologies would be required to get close to a 1.5 °C pathway

Costs continue to fall, but global progress in clean energy still needs to accelerate

Technology Status today against 2DS targets



Global clean energy deployment is still overall behind what is required to meet the 2°C goal, but recent progress on electric vehicles, solar PV and wind is promising

Priorities in moving to a sustainable energy future

- Be wary of cuts in upstream oil and gas investment - they pose threats to energy security and could lead to greater price volatility
- COP21 was historic and a catalyst for more innovation, research and investment in clean energy technologies
- 2015 saw progress in solar PV, wind and electric vehicles, but other areas such as CCS and biofuels are lagging behind
- International collaboration is crucial to respond to energy security & environmental challenges; IEA is pursuing modernization efforts:
 - I. *“Opening its doors” to the emerging economies*
 - II. *Taking on a new role to safeguard natural gas security*
 - III. *Becoming a global Clean Energy Hub*